TRANSPORTATION ELEMENT

Transportation Overview

According to the U.S. Census Bureau's 2000 Census Data, Lumpkin County has an estimated population of 21,016 and is comprised of some 284.47 square miles. The density per square mile for this area is approximately 73.9 persons and 31.6 housing units. The City of Dahlonega, likewise, has a total population of 3,638 persons with a total square mileage of 4.12 miles. The density per square mile for Dahlonega is 883.0 persons and 286.65 housing units. The estimated work-eligible population (16 years and over) is 16,458; of those individuals 10,776 are in the labor force.

In evaluating the transportation network of a community it is important to evaluate certain economic and social patterns that impact such infrastructure. For this reason, a list of relevant employment and commuting census data is listed in the tables below. These tables provide the reader with an understanding about the uses of Lumpkin County's transportation network and the factors, which impact this network.

Table 8.1 provides a comparison between Lumpkin County, Dahlonega and statewide statistics for place of work for workers. It is important to recognize that the majority of Lumpkin County's work population (51.3%) remained inside the county while 47.86% worked outside the county. Likewise, the majority of the City of Dahlonega's workforce (62%) worked within the county and 37% chose to work outside the county. Less than one percent of the total eligible workers for the county and city traveled outside of the state for work. By knowing where people are working transportation planners are able to better understand traffic patterns.

Table 8.1
P26. PLACE OF WORK FOR WORKERS 16 YEARS AND OVER--STATE AND COUNTY LEVEL [5] - Universe: Workers 16 years and over

	Georgia	Lumpkin County, Georgia	City of Dahlonega
Total:	3,832,803	10,118	1,703
Worked in state of residence:	3,737,030	10,033	1,692
Worked in county of residence	2,240,758	5,191	1,063
Worked outside county of residence	1,496,272	4,842	629
Worked outside state of residence	95,773	85	11

U.S. Census Bureau
Census 2000

Furthermore, *Table 8.2* helps to define how people chose to travel to work. This table reflects the commute travel modes for Lumpkin County and Dahlonega. Not surprisingly, 93.55% of all working residents of the county traveled to work by vehicle in 2000. Of those traveling to work by vehicle, 75.3% chose to drive alone while 18.2% chose to carpool, 3.31% chose to walk or ride a bicycle to work, 0.83% chose other means, and 1.97% worked from home. Public transportation comprised less than one percent (only 0.35%) of those traveling.

For the City of Dahlonega, 83.6% of its working residents traveled to work by vehicle. Eighty-eight percent (88.5%) chose to drive alone, while 11.5% chose to carpool; 13.2% chose to walk or ride a bike, 1.5% chose other means, and 1% worked from home. Public transportation also comprised of less than one percent for city residents.

Table 8.2
P30. MEANS OF TRANSPORTATION TO WORK FOR WORKERS 16 YEARS AND OVER [16] - Universe: Workers 16 years and over

	Georgia	Lumpkin County, Georgia	City of Dahlonega
Total:	3,832,803	10,118	1,703
Car, truck, or van:	3,525,972	9,465	1,424
Drove alone	2,968,910	7,623	1,260
Carpooled	557,062	1,842	164
Public transportation:	90,030	35	4
Bus or trolley bus	59,355	35	4
Streetcar or trolley car (publico in Puerto Rico)	843	0	0
Subway or elevated	20,116	0	0
Railroad	1,762	0	0
Ferryboat	382	0	0
Taxicab	7,572	0	0
Motorcycle	3,055	8	8
Bicycle	5,588	24	14
Walked	65,776	311	210
Other means	33,396	76	26
Worked at home	108,986	199	17

U.S. Census Bureau
Census 2000

Table 8.3 further defines the vehicle occupancy types for workers who chose to carpool. The average carpool for Lumpkin County and Dahlonega was 2 persons per vehicle. The data reveals that 71.3% (county) and 75% (city) were 2 person carpools, 17.3% (county) and 17.1% (city) were 3 person carpools, 7.7% (county) and 2.4% (city) were 4 person carpools, 3.2% (county) and 5.5% (city) were 5 to 6 person carpools, and 0.49% (county only) were7 or more person carpools.

Table 8.3
P35. PRIVATE VEHICLE OCCUPANCY FOR WORKERS 16 YEARS AND OVER [10] - Universe: Workers 16 years and over

	Georgia	Lumpkin County, Georgia	City of Dahlonega
Total:	3,832,803	10,118	1,703
Car, truck, or van:	3,525,972	9,465	1,424
Drove alone	2,968,910	7,623	1,260
Carpooled:	557,062	1,842	164
In 2-person carpool	406,954	1,314	123
In 3-person carpool	87,725	318	28
In 4-person carpool	34,505	142	4
In 5- or 6-person carpool	18,718	9	9
In 7-or-more-person carpool	9,160	9	0
Other means (including those who worked at home)	306,831	653	279

U.S. Census Bureau
Census 2000

Tables 8.4 and 8.5 provide a better understanding about the average trip length (time) for workers in Lumpkin County and Dahlonega. *Table 8.4* reveals that the average travel time for workers was somewhere between 10-24 minutes (county) and 5-24 minutes (city) in length for those who didn't work at home. However, a significant amount of the county popultion (10.3%) drove 30-34 minutes to work and (11.6%) drove 45 to 59 minutes to work. The maxiumum travel time was 90 minutes or more, which comprised only 4.5% of the working population.

Table 8.4

P31. TRAVEL TIME TO WORK FOR WORKERS 16 YEARS AND OVER [15] - Universe: Workers 16 years and over

	Georgia	Lumpkin County, Georgia	City of Dahlonega
Total:	3,832,803	10,118	1,703
Did not work at home:	3,723,817	9,465	1,686
Less than 5 minutes	93,446	445	144
5 to 9 minutes	334,403	863	449
10 to 14 minutes	511,628	1,468	226
15 to 19 minutes	583,820	1,535	215
20 to 24 minutes	519,875	1,226	214
25 to 29 minutes	209,374	316	55
30 to 34 minutes	535,531	1,021	71
35 to 39 minutes	108,867	326	58
40 to 44 minutes	132,121	273	41
45 to 59 minutes	347,610	1,152	69
60 to 89 minutes	234,588	846	98
90 or more minutes	112,554	448	46
Worked at home	108,986	199	17

U.S. Census Bureau
Census 2000

Table 8.5 breaks the travel time down further by observing the types of transportation utilized along with travel lengths. Some 59% of workers traveling by non-public transportation means, spent less than 30 minutes traveling to work. Additionally 16.3 % traveled 30-44 minutes, with the remaining population traveling 45 or more minutes.

Table 8.5

P32. TRAVEL TIME TO WORK BY MEANS OF TRANSPORTATION TO WORK FOR WORKERS 16 YEARS AND OVER WHO DID NOT WORK AT HOME [13] - Universe: Workers 16 years and over who did not work at home

	Georgia	Lumpkin County, Georgia	City of Dahlonega
Total:	3,723,817	9,919	1,686
Less than 30 minutes:	2,252,546	5,853	1,303
Public transportation	25,868	35	4
Other means	2,226,678	5,818	1,299
30 to 44 minutes:	776,519	1,620	170
Public transportation	20,442	0	0
Other means	756,077	1,620	170
45 to 59 minutes:	347,610	1,152	69
Public transportation	13,742	0	0
Other means	333,868	1,152	69
60 or more minutes:	347,142	1,294	144
Public transportation	29,978	0	0
Other means	317,164	1,294	144

U.S. Census Bureau
Census 2000

Table 8.6 shows the various times workers leave their homes to travel to work. According to the data, the majority of workers left home between 7:00 and 8:00 A.M. in order to reach work on time. Therefore, the average weekday peak hours of travel would be between 6 o'clock and 8:30 in the morning.

Table 8.6

P34. TIME LEAVING HOME TO GO TO WORK FOR WORKERS 16 YEARS AND OVER [17] – Universe: Workers 16 years and over

	Georgia	Lumpkin County, Georgia	City of Dahlonega
Total:	3,832,803	10,818	1,703
Did not work at home:	3,723,817	9,919	1,686
12:00 a.m. to 4:59 a.m.	108,019	375	58
5:00 a.m. to 5:29 a.m.	102,302	339	41
5:30 a.m. to 5:59 a.m.	156,682	542	40
6:00 a.m. to 6:29 a.m.	343,349	1,140	73
6:30 a.m. to 6:59 a.m.	422,728	1,098	107
7:00 a.m. to 7:29 a.m.	608,777	1,491	156
7:30 a.m. to 7:59 a.m.	610,869	1,687	271
8:00 a.m. to 8:29 a.m.	391,849	863	158
8:30 a.m. to 8:59 a.m.	187,692	267	97
9:00 a.m. to 9:59 a.m.	204,205	514	102
10:00 a.m. to 10:59 a.m.	79,927	185	63
11:00 a.m. to 11:59 a.m.	34,761	81	24
12:00 p.m. to 3:59 p.m.	219,434	844	343
4:00 p.m. to 11:59 p.m.	253,223	493	153
Worked at home	108,986	199	17

U.S. Census Bureau Census 2000

Land Use and Transportation

The high reliance on vehicle use for mobility is to a large extent the result of the separation of land uses. Single-family subdivisions are located in the county in areas distant from employment and activity centers, leading to a greater reliance on vehicles and an increase in vehicle miles traveled, as has been noted in the previous section. Likewise, current housing opportunities within Lumpkin County and the City of Dahlonega are not often located within a convenient walking distance to employment/activity centers, thus requiring vehicle use when public transit is not readily available. Working at home (i.e., home occupations) helps to reduce vehicle travel. Offering opportunities to walk to destinations also reduces vehicle dependency. The density and patterns of land usage has a major bearing on the modes and distances of travel.

Lumpkin County and the City of Dahlonega recognize the intrinsic relationship between Land use patterns/densities and travel patterns/behaviors. As a result, Lumpkin County and Dahlonega's comprehensive plan supports mixed uses in the downtown central business district, and the mixing of office and commercial uses so that daily lunchtime trips are shortened, reduced, or completely eliminated.

A. Inventory & Needs Assessments

According to the University of Georgia's annual publication of *The Georgia County Guide 2003, 22nd Edition*, Lumpkin County has approximately 510.92 miles of roadway. There is 84.11 miles of state route, 401.97 miles of county roads, and 24.84 miles of city streets that comprises Lumpkin County's roadway network. The report indicates that these numbers represent a 12.7% increase since 1993. Of the total road mileage, 431.49 miles or 84.5 % is paved and 79.43 miles or 15.5 % is unpaved. This is an increase of 54.9 % in the amount of paved mileage for the county since 1993. The GCG data further reveals that there are 25,699 registered vehicles and 15,933 licensed drivers in Lumpkin County. These local drivers along with

the countless number of visitors and tourists, who come to Lumpkin County annually, traveled some 797,537 daily vehicle miles.

The Georgia Department of Transportation's annual 400-Series Reports for 2002, indicates that the City of Dahlonega has approximately 37.03 miles of roadway. There is 10.10 miles of state route, 2.09 miles of county roads, and 24.84 miles of city streets that comprises Dahlonega's roadway network. The report indicates that these numbers represent a 17% increase since 1992. Of the total road mileage, 36.50 miles or 99% is paved and 0.53 miles or 1% is unpaved. This is an increase of 22% in the amount of paved mileage for the city since 1992. The total daily vehicle miles traveled in the City of Dahlonega for 2003 was 119,356 miles. This represents a 53% increase from 1992.

Currently, Lumpkin County has one airport and a recently established rural on-demand transit program. Dahlonega/Lumpkin County has no rail system, nor a navigable waterway system. Currently, sidewalks are only available within the City of Dahlonega and recreational pedestrian trails are limited to national forest areas and the North Georgia College and State University campus in Dahlonega, GA.

Roadways

In order to determine the adequacy of a roadway system, it is necessary to inventory all road facilities according to how they fulfill two purposes: (1) movement of traffic, and (2) access to property. By evaluating the degree to which a particular roadway serves each of the two basic functions, a functional classification can be determined.

Functional Classification

Functional classification is the process by which streets and highways are grouped into classes, or systems, according to the character of service they are intended to provide. Basic to this process is the recognition that individual roads and streets do not serve travel independently in any major way. Rather, most travel involves movement through a network of roads. It becomes necessary then to determine how this travel

can be channelized within the network in a logical and efficient manner. Functional classification defines the nature of this channelization process by defining the part that any particular road or street should play in serving the flow of trips through a roadway network. Functional classification is routinely used for planning roadway system development, determining the jurisdictional responsibility for particular systems, and fiscal planning. Therefore, understanding the function of a road is critical to the transportation planning process. The parameters established by a road systems function will greatly impact the need for future improvements to the system.

The U.S. Department of Transportation (USDOT) and the Federal Highway Administration (FHWA) have identified 11 different types of Functional Classifications in the United States. Each individual State's designated Transportation Agency is responsible for the classification of all roads in the public road system. In Georgia, this responsibility belongs to the Department of Transportation (GDOT). *Table 8.7*, shown below, identifies the different types of classifications used for roadways in Georgia.

Table 8.7
Types of Functional Classifications

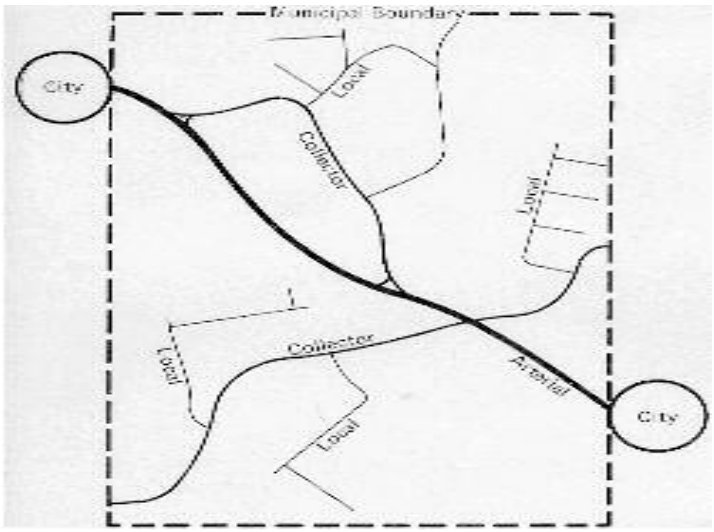
Key For Functional Classification	Stands For
IPA	Interstate Principal Arterial
PAR	Principal Arterial- Rural
MAR	Minor Arterial- Rural
MCR	Major Collector- Rural
NMC	Minor Collector- Rural
LOC	Local- Rural
UFY	Freeway- Urban
UPA	Principal Arterial- Urban
MAS	Minor Arterial- Urban
CST	Collector Street- Urban
LOU	Local- Urban

Source: GDOT, Office of Transportation Data

(Note: For the purpose of this document, only rural classifications are relevant to Lumpkin County.)

Generally, most roadways fall into one of four broader categories-- *principal arterial, minor arterials, collector roads, and local roads.* **Arterials** provide longer through travel between major trip generators (larger cities, recreational areas, etc.); and **collector** roads collect traffic from the local roads and also connect smaller cities and towns with each other and to the arterials; finally, **local** roads provide access to private property or low volume public facilities. *Figure 8.1* below, shows a diagram map of these four categories.

Figure 8.1: *Illustrates Functional Classification Categories*



Arterial Roadways

Generally, the primary function of an arterial roadway is to move traffic thru a defined region or corridor. The most common rural arterial systems are Interstate facilities. These roadways typically provide limited access to the facility and carry large volumes of traffic at higher speeds. With in municipal boundaries and in some rural non-municipal areas, these systems may provide limited access to cross streets and driveways to private property. There are two different types of arterial roadways: principal (major) arterials and minor arterials.

Principal (major) arterials serve major activity centers and major corridors within a community or defined area and typically have the highest traffic volumes. These roadways carry a large proportion of trips with origins and destinations within the surrounding region. They also serve to move thru-traffic into and out of

the region or area by connecting them to other communities. These roadways may provide access to private property or be a controlled access facility. Typically, these facilities have 100 to 200 feet right-of-way, four or more lanes, and may be divided by a median or some type of barrier. Speeds are generally high- ranging from 45 mph to 70 mph. Interstates and freeways are the best example of such road systems.

Minor arterials are often classified as streets and highways (non-interstate or freeways) that interconnect with and compliment the principal (major) arterials. These roadways serve trips of moderate length and emphasize more land access than major arterial roads. Minor arterials usually have 80 to 120 feet of right-of-way and have wide intersections with turn lanes. These roadways may have up to five lanes of traffic. However, most facilities in rural areas are two lanes. Speed limits are moderately high- ranging between 45-65 mph. Most State Routes typically fall into this category. The rural minor arterial road system should, in conjunction with the principal arterial system, form a rural network having the following characteristics:

- Link cities and towns (and other traffic generators, such as major resort areas, that are capable of attracting travel over similarly long distances) and form an integrated network providing interstate and inter-county service.
- Be spaced at such intervals, consistent with population density, so that all developed areas of the State are within a reasonable distance of an arterial highway.
- Provide (because of the two characteristics defined immediately above) service to corridors with trip lengths and travel density greater than those predominantly served by rural collector or local systems. Minor arterials therefore constitute routes whose design should be expected to provide for relatively high overall travel speeds, with minimum interference to thru movement.

Figure 8.2: *Illustrates Rural Arterial Characteristics*

Characteristics of Rural Arterial Highways Summary

1. **Long Distance**
2. **Higher Speeds**
3. **Higher Volumes of traffic – Multilane Facilities**
4. **Interstate Travel - Interstate System**
5. **Links Major Cities**
6. **Statewide and Inter-county Travel**
7. **Area Service Coverage**

According to the most recent data available for Lumpkin County, there are ten roadways that are classified as arterial roads. Six are classified as Rural Principal Arterial (PARs) or major roadways and four are classified as minor arterials. Below you will find a break down of these roadways and their assigned class:

- ***Principal Arterials (PAR)***
  - ***SR 9 (milepoints 1459- 2463)***
  - ***SR 9 Business (mpts 0062 - 0070)***
  - ***SR 11***
  - ***SR 60 (mpts 0266 – 0773)***
  - ***SR 60 Business***
  - ***SR 400***
- ***Minor Arterials (MAR)***
  - ***SR 9 (milepoints 0000 - 1232)***
  - ***SR 52 (mpts 1491 - 2164)***
  - ***SR 60 (mpts 0000 - 0266)***
  - ***SR 115 (mpts 0564 - 0353***

Collector Roadways

The primary purpose of a collector road is to collect traffic from other roadways in commercial and residential areas and then distribute that traffic onto arterial road systems. Some collector roads serve thru-traffic as well as local traffic, which accesses nearby destinations. Essentially, collectors are designed to provide a greater balance between mobility and land access within residential, commercial, and industrial areas. The makeup of a collector facility is largely dependent upon the density, size, and type of abutting developments. Additionally, due to the emphasis on balancing between mobility and access, a collector facility is better designed to accommodate bicycle and pedestrian activity while still serving the needs of the motoring public.

Collectors typically have 60-100 feet right-of-ways and two to four travel lanes. Collectors intersect with cross-streets and driveways more frequently than arterial systems. Speeds and traffic volumes along these roadways are moderate. Posted speed limits are generally between 30-55 mph.

There are two types of Collectors: major collectors and minor collectors- although there are only slight differences between the two.

Major Collector routes should: (1) Provide service to any county seat not on an arterial route, to larger towns not directly served by the higher systems, and to other traffic generators of equivalent intra-county importance, such as consolidated schools, shipping points, county parks, important mining and agricultural areas, etc.; (2) link these places with nearby larger towns or cities, or with routes of higher classification; and (3) serve the more important intra-county travel corridors. There are fourteen Rural Major Collector Roads (MCRs) in Lumpkin County and include either all or portions of the following roadways:

- ***SR 9 (mpts 1232 - 1459)***
- ***SR 9 Business (mpts 0000 -0056, 0070 - 0123)***
- ***SR 52 (mpts 0000 - 0954, 2164 – 2475)***
- ***SR 60 (mpts 1573 - 2108)***
- ***SR 115 (mpts 0000 - 0438)***
- ***CR 41/Cooper Mine Road (mpts 0189 - 0342)***
- ***CR 46/Grindle Bridge Road***
- ***CR 52/Old Lewis School Road***
- ***CR 66/Cavendar Creek Road***
- ***CR 134/Frogtown Road (mpts 0105 - 0307)***
- ***CR 187/Camp Wahsega Road***
- ***CR 188/Long Branch Extension***
- ***CR 190/Town Creek Road (mpts 0216 - 0372)***
- ***CR 226/Auraria Road***

Minor Collector routes should: (1) Be spaced at intervals, consistent with population density, to collect traffic from local roads and bring all developed areas within a reasonable distance of a collector road; (2) provide service to the remaining smaller communities; and (3) link the locally important traffic generators.

There are thirteen Minor Collector Roads (NMCs) in Lumpkin County and also include either all or portions of the following roadways:

- ***CR 2/Castle Bridge Road***
- ***CR 5/Lumpkin County Pkwy (mpts 0090 - 0536)***
- ***CR 41/Cooper Mine Road (mpts 0000 - 0189)***
- ***CR 72/Siloam Church Road (mpts 0000 - 0287)***
- ***CR 75/Oak Grove Ch. Rd (mpts 0000 – 0285, 0038 - 0696)***
- ***CR 83/Black Mtn. Rd/Yahoola Church Rd/Yahoola Rd***
- ***CR 84/Stone Pile Gap Road***
- ***CR 93/Wash Rider Road***
- ***CR 116/Mill Creek Church Road***
- ***CR 134/Frogtown Road (mpts 0000 - 0105)***
- ***CR 186/Little Mtn. Road (mpts 0000 – 0101)***
- ***CR 190/Town Creek Road (mpts 0000 – 0216, 0583 – 0735)***
- ***CR 202/Sheep Wallow Road (mpts 0352 - 0532)***

Figure 8.3: *Illustrates Rural Collector Characteristics*

Characteristics of Rural Collector Highways Summary

1. **Shorter Trips**
2. **Moderate Speeds**
3. **Lower Volumes of Traffic - Two Lane Facilities**
4. **Intra-county Travel**
5. **Serves:**
    a. **County Seats**
    b. **Larger Towns not on Higher System**
    c. **Consolidated Schools**
    d. **Shipping Points**
    e. **Larger Manufacturing Areas**

Local Roadways

Local roadways, because of their design features, are influenced less by traffic volumes and are tailored to provide more local access and community livability. Mobility on local facilities is typically incidental and involves relatively short trips at lower speeds to and from collector facilities. They are designed for neighborhood environments. This "neighborhood" nature requires travel speeds to be generally lower than collectors and arterials. Posted speed limits on local city streets generally range between 15 and 35 mph, depending on available right-of-way and the adjacent land uses. Local county roads are generally posted between 30-55 mph. Traffic volumes on local streets are generally less than 5,000 vehicles per day, and often vary depending on available right-of-way and the adjacent land uses.

Pedestrian and bicycle safety and aesthetics are generally high priorities on local road systems in and around residential and commercial areas. Wider travel lanes and broader turning radii, to accommodate larger vehicle sizes, are major considerations on local streets in industrial/commercial areas.

The rural local road system should have the following characteristics: (1) Serve primarily to provide access to adjacent land; and (2) provide service to travel over relatively short distances as compared to collectors

or other higher systems. Local roads will, of course, constitute the rural mileage not classified as part of the principal arterial, minor arterial, or collector systems.

Figure 8.3:
Illustrates
Rural Local Characteristics

Characteristics of Rural Local Highways Summary

1. **Adjacent Land is Primary Function**
2. **Shortest distances**
3. **Low Speeds**
4. **Low Volumes**
5. **Roads not Falling in Higher Systems**

Road System Inventory

The majority of all roadways in Lumpkin County are functionally classified as rural local roads. Lumpkin County's remaining roadways are classified respectively as follows: major collectors- rural; minor collectors- rural; minor arterials- rural; and principal arterials- rural. These roadway classifications can be further analyzed using the Georgia Department of Transportation's 400-Series Reports. *Table 8.8* provides a more detailed breakdown of the various functional classes for Lumpkin County roadways by mileage, route type, and road system.

Table 8.8
Mileage By Route Type and Road System
Lumpkin County
12/31/2002

	STATE ROUTE		COUNTY ROAD		CITY STREET		TOTALS	
Type Road System	*Mileage*	*VMT*	*Mileage*	*VMT*	*Mileage*	*VMT*	*Mileage*	*VMT*
RURAL PRINCIPAL ARTERIAL	33.37	201046.00	0.00	0.00	0.00	0.00	33.37	201046.00
RURAL MINOR ARTERIAL	24.61	129304.00	0.00	0.00	0.00	0.00	24.61	129304.00
RURAL MAJOR COLLECTOR	26.13	72976.00	39.31	66141.10	0.00	0.00	65.44	139117.10
RURAL MINOR COLLECTOR	0.00	0.00	46.17	126173.90	0.00	0.00	46.17	126173.90
RURAL LOCAL	0.00	0.00	316.49	183719.40	24.84	18176.80	341.33	201896.20
RURAL TOTAL	84.11	403326.00	401.97	376034.40	24.84	18176.80	510.92	797537.20
TOTALS	84.11	403326.00	401.97	376034.40	24.84	18176.80	510.92	797537.20

Source: GDOT 400 Series Reports # 445.

Furthermore, *Table 8.9* indicates the major road inventory for Lumpkin County with corresponding classifications, number of lanes, and agency jurisdiction/responsibility.

Table 8.9
Major Road Inventory By Functional Classification,
Number of Lanes, and Jurisdiction-
Lumpkin County and City of Dahlonega

Road Number	Name of Roadway	Descriptions (From/To)	Functional Classification	Number of Lanes	Jurisdiction
SR 9	Dawsonville Hwy	Dawson Co line to SR 11/US 129	PAR/MAR/MCR	2	State
SR 9 Business	E&W Main Streets	City Limits to City Limits	PAR/MCR	2	State
SR 11/ US129	Andrew Jackson Hwy	White Co Line to Union Co Line	PAR	2	Federal & State
SR 52	None	Dawson County Line to Hall Co Line	MAR/MCR	2	State
SR 60	None/Pine Tree Road	Hall Co Line to Union Co Line	PAR/MAR	2-4	State
SR 60 Business	South Chestatee Street/N.Oak Street	City Limits to City Limits	PAR	2	State
SR 115	Cleveland Hwy/Long Branch Road	Hall Co Line to White Co Line	PAR/MAR	2	State
SR 400	None	Dawson Co Line to SR 60	PAR	4	State
CR 2	Castleberry Bridge Road	Auraria Rd to SR 9	NMC	2	Local
CR 5	Lumpkin Co Pkwy	SR 400 to SR 400	NMC	2	Local
CR 41	Cooper Mine Road	SR 52 to Cavenders Creek Road	MCR/NMC	2	Local

CR 46	Grindle Bridge Rd	Cavenders Creek Rd to Roy Grindle Rd	MCR	2	Local
CR 52	Old Lewis School Road	Town Creek Church Road to Lewis School Rd	MCR	2	Local
CR 66	Cavender Creek Road	SR 9 Bus to White Co Line	MCR	2	Local
CR 72	Siloam Church Road	SR 9/52 to Davis Chapel Rd	NMC	2	Local
CR 75	Oak Grove Church Rd	SR 60 to Pat Gooch Rd	NMC	2	Local
CR 83	Black Mtn/ Yahoola Rd/ Yahoola Ch.Rd	Camp Wahsega Rd to Pat Gooch Rd	NMC	2	Local
CR 84	Stone Pile Gap Road	SR 9/60-US 19 to Yahoola Rd	NMC	2	Local
CR 93	Wash Rider Road	Oak Grove Rd to Camp Wahsega	NMC	2	Local
CR 116	Mill Creek Church Road	Little Mountain Rd to Sheep Wallow Rd	NMC	2	Local
CR 134	Frogtown Road	Old Lewis School Rd to Damascus Church Rd	MCR/NMC	2	Local
CR 186	Little Mountain Road	SR 9 to Max Wehunt Rd	NMC/LOC	2	Local
CR 187	Camp Wahsega Road	SR 60 to Cooper Gap Rd	MCR	2	Local
CR 188	Long Branch Rd & Extension	SR 60 to SR 52	MCR	2	Local
CR 190	Town Creek Road	Cavenders Creek Rd to White Co Line	MCR/NMC	2	Local
CR 202	Sheep Wallow Road	Sam Davis Rd to Little Mountain Road	NMC	2	Local
CR 226	Auraria Road	Dawson Co Line to SR 52	MCR	2	Local

Source: Compiled by Georgia Mountains RDC based on data from GDOT, 2003.

Traffic Counts

Table 8.10 provides the most current traffic counts available for Lumpkin County. Annual Average Daily Traffic (AADT) is the total volume on a roadway segment for one year divided by the number of days in the year. The AADT estimates are shown on the AADT MAP. All traffic count data is provide by the Georgia Department of Transportation and generated using data elements contained in the MTPT evaluation conducted during this study. For further details refer to *Appendix A.*

Table 8.10
2002 Traffic Counts
Major Roads in Lumpkin County

Road Number	Road Name	F.C.	AADT
SR 9	Dawsonville Hwy	PAR/MAR/ MCR	14,217
SR 9 Bus.	E&W Main Streets	PAR/MCR	7,741
SR 11/US 129/19	Andrew Jackson Hwy	PAR	2,562
SR 52	None	MAR/MCR	7,216
SR 60	Pine Tree Road	PAR/MAR	12,919
SR 60 Bus.	South Chestatee Street/N Oak Street	PAR	14,089
SR 115	Cleveland Hwy/Long Branch Rd	PAR/MAR	5,845
SR 400	None	PAR	16,796
CR 2	Castleberry Bridge Road	NMC	1,580*
CR 5	Lumpkin Co Pkwy	NMC	1,580*
CR 41	Cooper Mine Road	MCR/NMC	2,452
CR 46	Grindle Bridge Rd	MCR	1,580*
CR 52	Old Lewis School Road	MCR	569
CR 66	Cavender Creek Road	MCR	2,303
CR 72	Siloam Church Road	NMC	1,580*
CR 75	Oak Grove Church Rd	NMC	1,580*
CR 83	Black Mtn/ Yahoola Rd/ Yahoola Ch.Rd	NMC	1,580*
CR 84	Stone Pile Gap Road	NMC	1,580*
CR 93	Wash Rider Road	NMC	1,580*

CR 116	Mill Creek Church Road	NMC	1,580*
CR 134	Frogtown Road	MCR/NMC	522
CR 186	Little Mountain Road	NMC/LOC	1,580*
CR 187	Camp Wahsega Road	MCR	1,521
CR 188	Long Branch Rd & Extension	MCR	5,500
CR 190	Town Creek Road	MCR/NMC	2,381
CR 202	Sheep Wallow Road	NMC	1,580*
CR 226	Auraria Road	MCR	2,404

Source: Compiled by Georgia Mountains RDC based on Data from GDOT.

***** Note: Asterisk Numbers** *= Non 2002 GDOT County Coverage Reports AADT estimates. These estimates were obtained from GDOT's MTPT software Analysis Reports, which use older version (prior to FY 2002) of County Coverage Data and general traffic count estimates based on typical traffic volume patterns for similar road types***.**

When comparing AADT data it must be understood that traffic counts vary considerably from day to day, season to season, and year to year. Certain environmental factors and social patterns such as days of the week, different seasons of the year, weather, special events, and other anomalies can all have an impact on the raw data that is collected and the averages, which result for them. For the reason, FHWA and GDOT have established control factors, which help to account for and "factor-out" these anomalies. Thus, GDOT is able to reduce the probability of generating faulty data.

Levels of Service

The Florida Department of Transportation's Quality/Level of Service Handbook, 2002 Edition best defines Level of Service (LOS) as "a quantitative stratification of the quality of service" for a segment of or an entire roadway. Quality of Service (QOS), likewise, is defined as "a traveler-based perception of how well a transportation service or facility operates." In more simple terms, Level of Service (LOS) is a measurement of how well a roadway segment or intersection operates. There are six levels involved in

such evaluations. These quantitative stratifications are represented as alphabet characters and range from A (best) to F (worst), and each letter represents a capacity of service based upon established characteristics and average travel speeds (ATS). Florida's Q/LOS Handbook's Rural Undeveloped and Rural Developed characteristics best describe the typical roadways in Lumpkin County. Thus, these were applied during the evaluation process for the purpose of this document. *Table 8.10,* provides a listing of the LOS thresholds, which were used for the evaluation of services. The more uniform, 2000 Highway Capacity Manual (HCM 2000) characteristics are more applicable to Urbanized area and do not take into account the rural factors which impact Lumpkin County, and thus were not utilized for this analysis.

Table 8.11
Rural Levels of Service (LOS) Thresholds

LOS	*2-lane Hwy (ru) v/c*	*2-lane Hwy (rd) % FFS*	*Multilane Hwy (ru) v/c*	*Multilane Hwy (rd) v/c*	*Arterials ATS*	*Intersections/ Non-State Signalized Control Delay*
A	***≤ 0.34***	***≤ 0.34***	***≤ 0.34***	***≤ 0.34***	***> 42 mph***	***≤ 5 sec***
B	***≤ 0.34***	***≤ 0.34***	***≤ 0.34***	***≤ 0.34***	***> 34 mph***	***≤ 10 sec***
C	***≤ 0.34***	***≤ 0.34***	***≤ 0.34***	***≤ 0.34***	***> 27 mph***	***≤ 20 sec***
D	***≤ 0.34***	***≤ 0.34***	***≤ 0.34***	***≤ 0.34***	***> 21 mph***	***≤ 30 sec***
E	***≤ 0.34***	***≤ 0.34***	***≤ 0.34***	***≤ 0.34***	***> 16 mph***	***≤ 40 sec***
F	***≤ 0.34***	***≤ 0.34***	***≤ 0.34***	***≤ 0.34***	***≤ 16 mph***	***> 40 sec***

Source: Florida Department of Transportation's 2002 Quality/Level of Service Handbook

v/c = Demand Capacity Ratio % FFS = Percent Free Flow Speed
ATS = Average Travel Speed ru = rural undeveloped rd = rural developed

Lumpkin County desires to maintain an overall level of service (LOS) of "D" or better for all major roadways within the system, with an optimal LOS of "C" or better. An analysis of the network reveals that most roadways exceed this standard, however, there are a few that fall below the desired LOS. *Table 8.12*, below, provides an overview of the LOS Analysis and recommendations for action for the major roadways inventoried under this plan. For a detailed analysis for these facilities, as well as for all local roadways evaluated for Lumpkin County, please refer to *Appendix A.*

Table 8.12
Levels of Service and Required Actions
for Major Roads in Lumpkin County

Road Number	Road Name	F.C.	Current LOS	10 Yr LOS	20 Yr LOS	Action Required
SR 9	Dawsonville Hwy	PAR/MAR/MCR	A,B,C,D,E	A,B,C,D,~	B,C,D,E,~	N,M,L,X
SR 9 Business	E&W Main Streets	PAR/MCR	C,D,E	D,~	~	I,N,M
SR 11/ US129	Andrew Jackson Hwy	PAR	A,B	A,B,C	C,D	M,L,X
SR 52	None	MAR/MCR	A,B,C,D	A,B,C,D,~	C,D,E,~	N,M,L,X
SR 60	None	PAR/MAR	A,C,D,E,F	A,B,C,D,~	B,C,D,E,F,~	I,N,M,L,X
SR 60 Business	South Chestatee Street/N. Oak Street	PAR	B,D,E	B,C,~	D,~	I,N,M
SR 115	Cleveland Hwy/ Long Branch Road	PAR/MAR	A,C	A,D	C,~	I,M,X
SR 400	None	PAR	A,E	A,B,~	A,C,~	I,X
CR 2	Castleberry Bridge Road	NMC	A	B	C	X
CR 5	Lumpkin Co Pkwy	NMC	A,B	A,B	A,C,D	L,X
CR 41	Cooper Mine Road	MCR/NMC	A	B	C	X
CR 46	Grindle Bridge Rd	MCR	B	B	D	L
CR 52	Old Lewis School Road	MCR	B	B	D	L
CR 66	Cavender Creek Road	MCR	B	C	D	L
CR 72	Siloam Church Rd	NMC	A	A,B	A,C	X
CR 75	Oak Grove Church Rd	NMC	A	A,B	A,C	X
CR 83	Black Mtn/ Yahoola Rd/ Yahoola Ch.Rd	NMC	A	B	C	X
CR 84	Stone Pile Gap Road	NMC	A	B	C	X
CR 93	Wash Rider Road	NMC	A	B	C,D	L,X
CR 116	Mill Creek Church Road	NMC	A	B	C,D	L,X
CR 134	Frogtown Road	MCR/NMC	A	B	C	X
CR 186	Little Mountain Road	NMC/LOC	A	A,B	A,C	X
CR 187	Camp Wahsega Road	MCR	A	A,B	B,C	X
CR 188	Long Branch Rd & Extension	MCR	A,C	B,D	C,~	M,X
CR 190	Town Creek	MCR/NMC	A,B	A,B,C	D,C,E	L,X

	Road					
CR 202	Sheep Wallow Road	NMC	A	A,B	A,C	X
CR 226	Auraria Road	MCR	A	B	C	X

Source: Compiled by Georgia Mountains RDC based on data from GDOT, 2003.

Action Key: X= No Action; I= Immediate Action; N= Near Term; M= Medium Term; and L= Long Term

*****Note:** ***Each roadway has been evaluated in segments, which results in multiple LOS ratings for the same road. Because of the vast differences between the LOS for each road segment, the author has presented multiple LOS ratings rather than averaging the total number of LOS for each road. It was feared that listing a single LOS would skew the LOS results- thus providing an inaccurate evaluation of the roads performance.***

System Deficiencies

As discussed in the previous Levels of Service section, a number of roadways were identified as exceeding the thresholds for LOS. There are numerous road segments that are currently failing or will be failing in the very near future (LOS "E", "F", or "~"). Additionally, there are several road segments that have or will be breaching the thresholds over the period covered under this document.

Current Levels of Service

According to the previous table, there are several roadways that are experiencing high levels of congestion and thus have poor Levels of Service ratings. Deficiencies have been identified along SR 9, SR 9 Business, SR 52, SR 60, SR 60 Business, and SR 400.

SR 9 from Auroria Road to Morrison Moore Pkwy has an LOS rating "E". Then, SR 9/ Morrison Moore Pkwy from Calhoun Drive to SR 60 has an LOS rating "D". SR 9 Business/Main Street has an LOS rating "D" from SR9/SR 52 at Barlow Road/Morrison Moore Pkwy intersection to the Courthouse Square, except for a small area in front of the North Georgia College campus that has an LOS Rating "E". From the Courthouse Square to SR 60 Business, SR 9 Business/Main Street has an LOS rating "E" and a small area just west of Stephens Drive near the existing Courthouse has an LOS rating "D". SR 52 has only one area that is experiencing low levels of service- between SR 9/SR 60 and House Road the roadway has an LOS rating of "D". SR 60 has an LOS rating "D" from the Hall County line to GA 400. Then from GA 400 to

Deer Run Road it has an LOS rating "E". From Deer Run Road to SR 9/Morrison Moore Pkwy it drops to an LOS "F" and from Morrison Moore @ SR 60 Business to SR 9 Business it has an LOS rating "D". SR 60 Business/Chestatee Street from SR 9/Morrison Moore Pkwy to SR 9 Business at the Courthouse Square has an LOS rating "E". SR 60 Business/N. Grove Street from SR9/52 Business to Oak Grove Road has an LOS rating "E" and from Oak Grove Road to Camp Wahsega Road it has an LOS rating "D". There are no other deficiencies under current conditions.

10-Year Levels of Service

Under the 10-year projections, deficiency conditions along all of the previously mentioned roadway segments deteriorate and other segments are added. SR 9 from SR 52/SR 9 to Auroria Road drops to and LOS rating "D" and the previously mention stretch from Auroria Road to SR 9 Business drops to and LOS rating "F" and the area between Calhoun Drive and SR 60 Business drops to an LOS rating "F". SR 9 between SR60/Pinetree Road and SR 60 Business-North, drops to an LOS rating "D". SR 9 Business/Main Street between SR 9/Morrison Moore Pkwy and SR 60/N. Grove Street east of the Courthouse Square drops to an LOS rating "F" and from SR 60/N. Grove Street to SR 9/SR 60 drops to an LOS rating "D" except for a small are just west of Stephens Drive near the existing Courthouse which drops to an LOS rating "F". Finally, SR 9 from SR 9 Business/Main Street north to SR 60 Business-North drops to an LOS rating "D". SR 52 from SR 9/SR60 to House Road drops to an LOS rating "F" and from House Road to SR 115/Long Branch Road drops to an LOS rating "D". SR 60- South from the Hall County line to SR 9/Morrison Moore Pkwy drops to and LOS rating "F" and from SR 60 Business/S. Chestatee Street to SR 9 Business/Main Street, SR 60/Pine Tree Road drops to an LOS "F". SR 60 Business from SR 9/Morrison Moore to Camp Wahsega Road drops to an LOS rating "F". Finally, SR 115/CR 188 Long Branch Road from GA 400 to SR 52 drops to an LOS rating "D" and from SR 52 and Long Branch Ext intersection to the White County line it drops to an LOS rating "D".

20-Year Levels of Service

Under the 20-year projections, all of the previous segments conditions deteriorate to levels of service rating "F". They include the following road segments:

- SR 9 from SR 52 to SR 9 business
- SR 9/Morrison Moore Pkwy from Calhoun Road to SR 60
- SR 9 from SR 9 Bus/Main Street to SR 60 Business-North
- SR 9 Business/Main Street from SR 9/Morrison Moore to SR 60/Pine Tree Rd
- SR 52 from SR 9 to SR 115/Long Branch Road
- SR 60 from Hall County Line to SR 60 Business
- SR 60 Business from Morrison Moore Pkwy to Camp Wahsega Road
- SR 115/CR 188 Long Branch Road from GA 400 to SR 52
- SR 115 from SR 52 to White County Line

Other areas will also be affected y increased traffic. SR 9 North from SR 60 Business North to Yahoola Church Road will drop to an LOS rating "E". SR 60 Business North from Camp Wahsega Road to SR 9 North will drop to an LOS rating "D". US 129/SR 11 will drop to an LOS rating "D". CR 52/Frogtown Road will also drop to an LOS rating "D" between Town Creek Church Road and Damascus Church Road. CR 66/Cavendar Creek Road will drop to an LOS rating "D" between SR 9 North and House Road and between House Road and Town Creek Church Road it will drop to an LOS rating "E". Both ends of CR 93/Wash Rider Road will drop to an LOS rating "D". CR 116/Mill Creek Church Road will drop to an LOS rating "D". Finally, CR 190/Town Creek Church Road will drop to an LOS rating "D" between Cavender Creek Road and the White County line.

Roadway Improvements

As previous mentioned under *Table 8.12*, the system analysis for Lumpkin County evaluated the road network for needed improvements and identified several roadways, which required either minor or major improvements. These recommended improvements where listed as being needed immediately or in the near, medium, or long term range in order to meet the established Level of Service goals for the county. Minor improvements are defined as facility improvements such as road widening of the average lane width up to 12-feet and shoulder widths up to 6 feet. Major improvements are defined as facility improvements with additions of: (1) a passing lane for two-lane facilities; and/or (2) one or more additional lane(s) in each direction (total of two more lanes) if a multilane or freeway facility.

Both major and minor improvements were identified as being needed for the following roadways:

- SR 9/Dawsonville Hwy/Morrison Moore Pkwy
- SR 9 Business/ East & West Main Street
- SR 11/US 129/Andrew Jackson Hwy
- SR 52
- SR 60 (Pine Tree Road)
- SR 60 Business/S. Chestatee Street & N. Grove Street
- SR 115/Cleveland Hwy
- SR 400
- CR 5/Lumpkin County Pkwy
- CR 46/Grindle Bridge Road
- CR 52/Old Lewis School Road
- CR 66/Cavender Creek Road
- CR 93/Wash Rider Road
- CR 116/Mill Creek Church Road
- CR 188/Long Branch Road and Ext.
- CR 190/Town Creek Road

For a complete list of recommendations and associated costs please refer to *Appendix A* of this document.

Scenic Highways

Because of the great value placed on the natural, cultural, and scenic resources possessed by Lumpkin County, the community, as a whole, has strived to utilize these resources as a means of promoting and maximizing tourism in the area. At the same time, Lumpkin County desires to protect these areas from encroachment and preserve them for future generations to enjoy. Georgia's Scenic Byway Program provides a means by which to accomplish both goals and as a result Lumpkin County is an active participant in the program.

The Georgia Scenic Byway Program requires that any road designated as a Scenic Byway have a complete Corridor Management Plan established for the entire designated route. This management plan helps to preserve and protect scenic views and vistas, various natural resources, and the landowners along the designated route(s). It also allows for funding opportunities to maintain these resources and the roadways themselves, as well as for promotional purposes for encouraging tourism along the routes.

Currently, Lumpkin County does not have an officially designated scenic byway, however there has been significant discussions held about establishing such a route within the county, if possible. In 2000, the Lumpkin County Chamber of Commerce sponsored a proposed Scenic Byway and began a draft

application for SR 11/US 129 and SR 180 as a joint venture with Union County, however, it was never officially submitted for evaluation and acceptance by GDOT due to a lack of public support. Discussions have also taken place regarding the establishment of a Scenic Byway along the SR 60 corridor connecting Lumpkin, Union, and Fannin Counties. Another possible route includes SR 52 West. Other scenic areas exist in Lumpkin County along the local road network however there is currently no desire to include these roadways as part of the Scenic Network. For further details please refer to the Scenic Roads Plan Map on the following page.

Bridges and Major Culverts

GDOT maintains a management system on every bridge and major culvert in the state. These Inventory Data Listings include the following relevant information:

- Location
- Sufficiency rating
- Facility carried
- Features intersected
- Year constructed
- Year reconstructed (if applicable)
- Date of last inspection
- Design load
- Structure and foundation type
- Appurtenances information
- Work programming data
- Hydraulic data
- Number of lanes
- Length, width and clearance
- Posting data

The structures are graded by a sufficiency rating, which is used to determine scheduling for rehabilitation or reconstruction of the facility. With adequate maintenance, any structure with a rating above 75 should still be in acceptable condition 20 years from its rating date. Those structures with a rating between 65 and 75 are more marginal, and those with a sufficiency rating below 65 are likely to require major rehabilitation or reconstruction within the next 20 years.

Lumpkin County currently has twenty-eight (28) locally owned structures that meet the state qualification to be classified as bridge/culvert structures. It must be noted that more bridge/culvert structures exist throughout Lumpkin County. There are numerous privately owned structures and other structures that may be considered bridges/culverts. However, these structures do not meet the established criteria to be classified under the state law of what is considered to be a "bridge structure," therefore they are excluded from consideration. Additionally, there are several bridges that are owned and maintained exclusively by the state. These structures are also being excluded from consideration in this document. All routine inspections are conducted on a two-year schedule and performed by certified bridge inspectors of the Georgia Department of Transportation. Lumpkin County receives a report from GDOT at the end of each cycle, which details the status of each structure. Lumpkin County and GDOT work cooperatively to ensure that necessary bridge repairs are conducted. These work projects are scheduled into the Georgia Statewide Transportation Improvement Program. This program establishes funds to cover the expenses for federal aid and state aid projects. The table below summarizes the total number of bridges with a sufficiency rating below the recommended 65 under the most recent Bridge Report conducted for Lumpkin County. Appendix B provides the detailed report.

Table 8.13
Bridge and Major Culvert Locations
with Sufficiency Ratings below 65

Roadway Type Carried by Structure			
State Route	**County Road**	**City Street**	**Total**
0	11	0	11

Source: Georgia Department of Transportation
Lumpkin County Bridge Report, 2002

Currently, there are no officially designated evacuation routes for Lumpkin County. The county has, however, identified SR 400, SR 60, and SR 9 as potential or likely evacuation routes in the event of some catastrophic event. Therefore only bridges located along these routes would be considered under this document. At this time all of these bridges appear to be in sufficient condition to serve the evacuation needs of the community.

Signal Warrants and Traffic Control

Currently there are currently eight traffic signals in operation within the planning area. Five are located within the city limits of Dahlonega and three are located in the county. The following is a list of these traffic signals:

Dahlonega:
- SR 60/Crown Mtn at its intersection with Morrison-Moore Pkwy.
- SR 9 Bus./East Main Street at its intersection with Barlow Drive and Morrison-Moore Pkwy.
- SR 9 Bus./East Main Street at its intersection with SR 60 Bus./North Grove Street
- SR 9/52 Bus. at its intersection with SR 60/Pine Tree Road at Wal-mart Entrance
- SR 60 at its intersection with SR 52 East

Lumpkin County:
- SR 400 at its intersection with Burnt Stand Road/County Industrial Pkwy
- SR 400 at its intersection with SR 60
- SR 52 at its intersection with SR 115/Long Branch Road

In addition to these eight intersections, the Georgia Department of Transportation has recently permitted two additional intersections to be signalized in the coming months:

- SR 60 at its intersection with Seven Mile Hill Road- 24 hr all-way flashing signals
- SR 9 Bus./Main Street at its intersection with Skyline Drive at the North Georgia College and State University Campus- Signalization w/pedestrian crosswalk.

None of these traffic control devices are owned or maintained by Lumpkin County or the City of Dahlonega. All traffic signals at intersection with state routes are owned and maintained by the Georgia Department of Transportation. Traffic controls are generally required to conform to the standards and guidelines established under the Manual of Uniform Traffic Control Devices for Streets and Highways. Any future additions in traffic signals, which may become necessary during the planning horizon (determined by a signal warrant), will most likely occur at intersections of state routes and local roads, thereby becoming GDOT's responsibility.

Roadway Signage

All road signs are erected in accordance with the Georgia Manual on Uniform Traffic Control Devices for Streets and Highways. Requirements for signage depend on whether they are erected on conventional roads, expressways, or freeways. The Georgia Department of Transportation is responsible for signage in the rights-of-ways of all state routes. The location and composition of Lumpkin County's and the City of Dahlonega's signage meet applicable specifications.

Public Transit

Currently, Lumpkin County operates a 5311-Rural Public Transit Service Program. The services are established as demand-response system with a typical 24-hour advance service request. Operational hours are from 8 am to 4:30 pm, Monday thru Friday with some after-hours, special events, & emergency trip demand services. The program operates two buses within the county and runs an average of 6 to 11 trips per day. Program officials estimate that 60% of their current cliental is elderly (over 65 years). The remaining transit users are low-income or DFACS clients. The program is also handicap accessible.

The program's current operational status appears to be adequate to meet the basic needs of the community. There are, however, future plans to expand the services where possible as rider-ship/demand increases. Additionally, there are plans to evaluate the needs for connectivity into surrounding communities as a means of increasing rider-ship. Program officials have also indicated a desire to expand the services to include a fixed-route system for the community in an effort to increase effectiveness in services.

Airports and Air Transportation

The Lumpkin County- Wimpy's Airport is located in Lumpkin County in northern Georgia approximately 49 miles west of Toccoa and 31 miles northwest of Gainesville. The primary highway access to the current airport site from the north and south is via U.S. Highway 19/Georgia Highway 9/Georgia Highway 60. The

airport, situated on 64 acres, is owned and operated by Lumpkin County. The airport accommodates a variety of aviation related activities that include business aviation, recreational flying, forest fire fighting, ultra-lights and experimental aircraft, and agricultural spraying. According to the 2002 State Aviation System Plan- the airport facility "cannot fully meet the recommended system plan role due to physical constraints restricting airport development." Furthermore, the plan recommends that a new Level 1 airport facility be constructed at a new site in lieu of making improvements to the existing facility.

Existing Facilities

The Wimpy Airport is currently classified as a General Aviation Airport. It has one runway, Runway 15/33, which is 3,035 feet long by 50 feet wide. The threshold is displaced 754 feet on Runway 15 and 695 feet on Runway 33. Current landside facilities and services include a Fixed Based Operator (FBO), a self-serve fuel concession that provides AvGas fuel and a 500 square foot administration building. The airport has seven (7) hangar parking spaces.

In the Summer 2003, the Georgia Department of Transportation completed its yearlong update to the *Georgia Aviation System Plan*. Under this plan, GDOT established certain criteria and set forth certain policies, which continues the current classification of the Wimpy Airport as a Level I- General Aviation Airport. These airports are defined as minimum standard general aviation airports that have a local impact. The service area is typical 30 minutes or less. A Level I airport should be capable of accommodating all small-engine and some twin-engine general aviation aircraft. These airports should be able to support business needs by accommodating aircraft such as the Beech Barron, the Beech Queen Air, and the Piper Navajo. Level I airports should also have at least 4,000 feet of runway, and a non-precision approach.

Current and Forecast Demand

A review of the airport's historic demand levels shows that based aircraft decreased from 20 in 1990 to a current level of 18. By 2021, the airport's based aircraft are expected to reach 22. The airport has approximately 4,600 annual aircraft takeoffs and landings divided between local and itinerant operations.

This figure is projected to increase to 5,150 by 2021. By the end of the planning period, the airport is expected to reach 7% of its available annual operating capacity, as shown in *Table 8.14*.

Table 8.14
Current and Forecast Demands
Dahlonega Airport- Lumpkin County, Georgia

Dahlonega Airport	**Current**	**2006**	**2011**	**2021**
Based Aircraft	18	19	20	22
Operations	4,600	4,702	4,833	5,105
Local	1,314	1,343	1,381	1,459
Itinerant	3,286	3,359	3,452	3,647
Enplanement	N/A	N/A	N/A	N/A
Demand Capacity Ratio	6%	6%	6%	7%

Georgia Department of Transportation
Aviation System Plan Update 2002

Airport Facility and Service Needs

The Lumpkin County-Wimpy Airport has been classified a needed Level I airport and should provide appropriate facilities and services commensurate with its system role. The Georgia Aviation System Plan recommended that the airport be replaced with another Level I airport with appropriate facilities and services, after determining that the existing facility is incapable of overcoming the current physical constraints that exists. Airport improvements identified in the System Plan include:

- Extend runway by 965 feet
- Widen runway 25 feet
- Construct turnarounds
- Install MITL
- Install non-precision approach
- Install rotating beacon, segmented circle, and PAPI
- Install MIRL
- Install PAPI
- Phase I: 4 additional hangar spaces are needed; Phase II: 1 additional hangar spaces are needed; Phase III: 1additional hangar space is needed
- Phase I: 10 additional apron parking spaces are needed; Phase III: 1 additional apron parking spaces are needed
- Phase I: 24 additional auto parking spaces are needed; Phase II: 1 additional auto parking space; Phase III: 3 additional auto parking spaces are needed
- Provide 250 square feet of additional terminal/admin space
- Full limited service FBO
- Full Service Maintenance

The following table summarizes current facilities and services, the airport's facility and service objectives, and actions/projects that are needed for the Lumpkin County-Wimpy Airport to meet these objectives.

Table 8.15
Facility and Service Objectives Level III
Dahlonega- Dahlonega Airport-46A

	EXISTING	SYSTEM OBJECTIVE	RECOMMENDED
Airside Facilities			
Runway Length	3,035	4,000 feet	Extend 965 feet
Runway Width	50	75 feet	Widen 25 feet
Taxiway Length	None	Turnarounds	Turnarounds
Approach	Visual	Non-Precision	Non-Precision
Lighting- Runway	None	MIRL	MIRL
Lighting- Taxiway	None	MITL	MITL
NAVAIDS	None	Rotating Beacon	Rotating Beacon
NAVAIDS	None	Segmented Circle	Segmented Circle
NAVAIDS	Wind Cone	Wind Cone	None
NAVAIDS	None	PAPI	PAPI
NAVAIDS	None	Other NAVIDS as required for non-precision approach	None
Weather	None	None	None
Ground Communications	Public Phone	GCO/Public Phone	None
General Aviation Landside Facilities			
Hangared Aircraft Storage	7 spaces	60% of base fleet	Phase I: 4 add'l spaces needed Phase II: 1 add'l space needed Phase III: 1 add'l space needed
Apron Parking/Storage	No spaces	40% based aircraft plus additional 25% for transient aircraft	Phase I: 10 add'l spaces needed Phase III: 1 add'l space needed
Terminal/Administrative	500 sq. ft.	750 sq. ft. minimum amenities	Provide add'l 1,250 sq. ft.
Aviation Auto Parking	None	One space for each based aircraft, plus 25% for visitors/employees	Phase I: 24 add'l spaces needed Phase II: 1 add'l spaces needed Phase III: 3 add'l spaces needed
Services			
FBO	None	Limited Service	Provide Limited Service
Fuel	AvGas	AvGas	None
Fuel	None	Jet Fuel	Jet Fuel

Source: GDOT – Georgia Aviation System Plan Update 2002

Other Recommendations

Additionally, the Georgia Aviation Systems Plan calls for the Wimpy Airport to meet Level I performance objectives by completing the following actions/projects:

- Update the Airport Master Plan in Phase I (2003) and Phase III (2018)
- Adopt Land Use/Zoning Controls to protect the airport and neighboring land owners

Development Costs

According to GDOT's Georgia Aviation System Plan 2002 Update, the estimated total costs for completing each of the GASP's recommendations is $7,265,900. There are no Phase I projects scheduled under the

GASP. Phase II costs are estimated at $375,000 and Phase III is estimated to be $6,890,900. For a detailed layout of the capital improvements and associated cost estimates for each of the recommendations and phases that have been proposed for the Wimpy Airport, please refer to GDOT's Georgia Aviation System Plan.

Pedestrian Pathways: Sidewalks and Recreational Trails

Currently, the only public owned and maintained sidewalks, which exist in Lumpkin County, are located within the City of Dahlonega. Many areas within the City have sidewalks along both side of the roadway. These facilities are primarily located in the area surrounding the downtown Square and North Georgia College and State University Campus. Other areas have sidewalks, which are only located along one side of the street. For complete details of the locations of sidewalks please refer to the Existing Sidewalks Map on the following page. Other sidewalks may exist within Lumpkin County and Dahlonega, however, they are privately owned and maintained, and therefore, they are outside the scope of this documents evaluation.

Pedestrian Facility Recommendations

Whether performing improvements to existing sidewalks or designing new pedestrian facilities, efforts should be made to create a pleasant and safe walking experience for all users. The following recommendations are made to help in achieving this goal. Beyond what is address below, additional recommendations for pedestrian facilities are identified in the Georgia Mountains Regional Bicycle and Pedestrian Plan. Lumpkin County supports this plan and desires to assists the RDC in implementing such portions of the plan as it applies to Lumpkin County.

Existing Sidewalks

Sidewalks throughout the planning area should be in compliance with the Americans with Disabilities Act (ADA). Adequate curb cuts and railings (if necessary) should be installed. Repairs to cracked and deteriorating concrete should be made on a regular basis. Children and older adults are often

the largest users of sidewalks. This group of pedestrians may have mobility issues that would be made more difficult by uneven pavement. For safety, sidewalks should be in good condition.

In making repairs to existing sidewalks, care should be taken if historic paving materials are present. Many of the communities within the Georgia Mountains region have sidewalks built with hexagonal pavers. These pavers may be a character-defining element of a historic district and should be carefully repaired and preserved in place. Historic commercial buildings often have small ceramic tiles at the recessed entrances of stores that abut the sidewalk. When repairing or replacing sidewalks, these historic tile entrances should not be disturbed.

When existing sidewalks are in need of major repair or where a road project requires sidewalk reconstruction, every attempt should be made to improve sidewalks with a planting strip between the road and sidewalk. Planting strips that separate pedestrians from vehicular traffic are widely accepted as a way of helping pedestrians feel safer and more comfortable. The design of planting strips depends largely on the volume and speeds of traffic and whether or not on-street parking exists. GDOT has several recommendations for planting strip designs and should be consulted when the time comes to make improvements to sidewalks.

New Sidewalks

Building new sidewalks is the second, but equally important, priority for pedestrian facility enhancements. When making recommendations for new sidewalks, first priority is to link existing sidewalk sections with new sidewalks. This creates a continuous sidewalk path and reduces the need for pedestrians to cross the street or walk on roadways. In general, this is necessary in city centers where sidewalks may have been built in stages or as part of the construction of a building site.

New sidewalks should extend existing sidewalks to local schools, parks, recreation centers, institutions, and commercial activity nodes. GDOT recommends that, whenever possible, sidewalks should be located on both sides of the street. Where sidewalks have not previously existed, constructing sidewalks on one side

of the street is acceptable for the short-term. As with improvements to existing sidewalks, new sidewalks should be ADA accessible and have a planting strip.

It is recommended that subdivision regulations for sidewalks meet the same standards as city and county sidewalks to include planting strips and ADA compatibility. In addition, subdivision sidewalks should link to public sidewalks to provide a continuous path.

When building new sidewalks in listed or eligible historic districts, a preservation professional should be consulted to identify significant landscape elements that should not be altered. New sidewalks are compatible with historic districts when done sensitively. Planners may want to recommend incorporating appropriate historic paving materials into the design of a new sidewalk.

Pedestrian amenities such as street furniture and lighting improve the quality of the pedestrian experience. Street furniture includes benches, trash receptacles, bike racks and newspaper boxes. The installation of these items should be carefully planned to allow for the uninterrupted flow of traffic. Too much street furniture creates clutter and maintenance issues that can be a nuisance for the pedestrian. It is recommended that street furniture be clustered in areas that receive at least a moderate amount of foot traffic and out of the path of pedestrians. National standards have been established for the minimum space requirements for street furnishings. These standards should be consulted when planning new streetscapes. GDOT can also assist local governments in this regard.

Proper lighting for pedestrians is an important safety consideration. Most urban areas have adequate lighting in place. For pedestrian purposes it is recommended that lighting fixtures be shorter than typical street lighting. Generally, lighting fixtures for pedestrians should not exceed 15-feet. Care should also be taken to choose lighting fixture styles that are appropriate to the character of the neighborhood. Overly stylistic lights would not typically be appropriate for historic rural mountain communities such as Lumpkin County and Dahlonega. Simple contemporary fixtures are often more compatible. Lighting fixtures should be directed toward the sidewalk area and not upward. Light that is pointed at the sky creates a glow that can hamper the vision of pedestrians and cyclists. In addition, it becomes necessary to add more lighting,

which raises the cost. It is recommended that light fixtures be positioned for maximum effectiveness, thereby increasing the quality of the pedestrian experience and decreasing the cost to the community and the negative impacts of environmental or light pollution.

Other Alternate Mode Recommendations

Some types of facilities, such as multi-use trails and scenic highways, encourage use by more than one mode of travel. Because multi-modal use creates the need for some additional considerations, some further recommendations are mentioned below.

Multi-use Trails and Paths

Multi-use trails are off-road paved (either pervious or impervious) trails that are shared by pedestrians and cyclists and used for other activities such as horseback riding. These trails are usually considered to be recreational, but people also use short segments for daily activities when they are located near commercial activity centers. GDOT recommends that multi-use shared paths be 10-feet in width, at a minimum. However, a 12-foot or more width offers greater comfort for users. These trails are popular with both locals and tourists. As an example, the Silver Comet Trail in Georgia currently has 38 miles of shared trails with plans for a total of 51 miles. Eventually the trail will connect with the Chief Ladiga Trail in Alabama to cover 101 miles from Atlanta to Anniston, Alabama.

Bicycle Travel

Bicycle users have various levels of expertise, which makes different types of facilities more desirable. Cyclists are typically separated into three groups: Type A, Type B and Type C. These types are described in the AASHTO Guide for the Development of Bicycle Facilities as follows:

- Type A Cyclists: Advanced or experienced riders who generally use their bicycles as they would a motor vehicle.
- Type B Cyclists: Basic or less confident adult riders who may also be using their bicycles for transportation purposes, e.g. to get to the store or visit friends, but prefer to avoid roads with fast

or busy motor vehicle traffic unless there is ample roadway width to allow easy overtaking by the faster traveling motor vehicle.

- Type C Cyclists: Children, riding on their own or with parents, who may not travel as fast as their adult counterparts but still require access to key destinations in their community, such as schools, convenience stores and recreation facilities.

Cyclists desire safe routes to go to work and school, complete errands, and ride for health and recreational reasons. Cyclists are also discouraged from riding on sidewalks, which can create safety hazards for pedestrians. In order to provide safe and attractive routes for cyclists, bike routes should be recommended for local designation. There are several acceptable ways to delineate a bikeway. These different types depend greatly on the volume and speed of traffic and are typically chosen during the design phase of the bikeway project.

For the purposes of future guidance for appropriate bikeway selection, the types of bikeways will be discussed. Bicycle facilities have four basic types (three on-road facilities and one off-road facility) that are described in more detail below. In addition, recommendations from a study for the Pedestrian and Bicycle Information Center completed in August 2002 titled "Bicycle Facility Selection: A Comparison of Approaches" will be summarized. For further information on bicycle facilities, the following sources can be consulted:

- Georgia Bicycle and Pedestrian Plan, Georgia Department of Transportation;
- Pedestrian and Bicycle Information Center;
- Federal Highway Administration (FHWA), and
- American Association of State Highway and Transportation Officials (AASHTO).

The simplest type of bikeway is a paved shoulder. Especially in rural areas, AASHTO suggests that paved shoulders of a four-foot width minimum can act as a bicycle facility. GDOT has guidelines available for signing a bike route. It is recommended that all routes, whether they are a paved shoulder or striped bike lane, be signed. Type A cyclists are typically comfortable with this type of bikeway, but Type B and Type C cyclists may not prefer it.

The next level of bikeway is a wide outside lane or shared lane. As the name suggests, bicyclists share the outside lane of traffic with motorists. Generally the minimum width of an outside lane must be 14-feet and should not include the gutter pan. It is acceptable to reduce the width of an interior lane of traffic in order

to provide for a wider outside lane according to AASHTO. This allows for safer bicycle travel without widening the roadway.

The final on-road bikeway is the bike lane. A bike lane is a striped separate lane designated solely for bicycles. A minimum four-foot wide lane is acceptable for lanes with no curb, gutter or parking. A minimum of five-feet is necessary for lanes that are adjacent to parking. In some situations where bicyclists must share the lane with parallel parking areas, a minimum of 11-feet is necessary for lanes with no curb and 12-feet for lanes with a curb face. Bike lanes require a solid white line stripe to separate it from vehicular traffic.

An additional off-road bikeway is a separated lane. This lane is located adjacent to a road and may have a planting strip or cement wall between the lane and road. The less-experienced Type B and Type C cyclists favor the security of this type of bikeway. These are used most often for recreational use in Georgia and none are recommended in this plan.

For cyclists to be able to use their bikes for daily activities, it is necessary to provide bike racks in public areas such as schools, government buildings, parks, and commercial activity centers. Bike racks should support a bicycle in two places and prevent the wheel from tipping. All racks should be anchored so that they cannot be stolen. Racks should be located near the entrances of buildings and under cover, if possible.

Lumpkin County has very limited bike facilities. State Bike Route 90/The Mountain Crossing Corridor is currently the only officially designated route for bike riders in Lumpkin County. This route is an extended route that begins in Walker County, Georgia and extends eastward thru Whitfield, Murray, Gilmer, Dawson, Towns, Lumpkin, Towns, White, Habersham, and Rabun Counties. The total mileage for the route is 210.3 miles. The Lumpkin County portion of the route is 23.4 miles. It covers portions of SR 60 and SR 180, with a small section along SR 11/US 129 in Lumpkin County. The only other facilities that exist in the county are the multi-use facilities located along Nottely River, which connect Meeks Park and the North Georgia Tech campus, just outside of Dahlonega.

Although, there are currently no other solid plans to develop future bike facilities or create new "designated" bike routes, it is the goal of the community to expand existing facilities and develop new facilities where physically and financially possible.

Throughout the development stages of the planning process, discussions have taken place between various citizen advisory committee members and local government officials regarding a desire to establish designated mountain bike recreational trails within Lumpkin County. The expressed desire has been for the County and US Forestry Service to explore the concept of a joint effort to establish official mountain biking trails on existing USFS lands as a means of providing alternative biking activities and advancing tourism within the county.

Beyond what is address above, additional recommendations for bicycle facilities are identified in the Georgia Mountains Regional Bicycle and Pedestrian Plan. Lumpkin County supports this plan and desires to assists the RDC in implementing such portions of the plan as it applies to Lumpkin County.

8.3 Community Goals and Strategies

The Comprehensive Plan's Transportation Element for Lumpkin County and Dahlonega represents an effort to define a set of transportation programs and projects that address existing and future transportation needs within the county. The plan's recommendations will guide future transportation investments and provide mobility solutions to accommodate population and employment growth in this area.

Thoughtful goals and effective performance measures ensure a long-range, needs-based perspective that assists in effectively identifying and implementing appropriate transportation initiatives for Lumpkin County and the City of Dahlonega. The goals and performance measures must be compatible in order to develop a transportation network that also addresses regional needs.

Performance measures are necessary tools in needs-based plan development because they can track performance over time and assist in identifying improvements. They provide accountability and link

strategic planning to resource allocation. By defining specific performance measures, Lumpkin County and Dahlonega will be able to measure the effectiveness of selected projects and programs in meeting goals. Performance measures as a package indicate the extent to which the current and recommended programs help achieve established goals.

The federal Transportation Equity Act for the 21st Century (TEA-21) emphasizes that transportation infrastructure investment should be driven by the need for improvement. The goals and performance measures established for Lumpkin County and Dahlonega were designed to meet the county's specific transportation needs, while simultaneously incorporating sensitivity to the transportation efforts of the region's multiple planning partners. The goals and performance measures for the area, provided in *Table 8.16* consider the objectives outlined in the GMRDC's Regional Comprehensive Plan.

Appalachian Scenic Corridor

Lumpkin County recognizes that the Georgia Department of Transportation conducted a study for the Appalachian Scenic Corridor. Routes proposed and recommended in the study called for the corridor possible travel through the center of the county and through the City of Dahlonega. Lumpkin County does not support such recommendation. While Lumpkin County is not totally opposed to the development of the Appalachian Scenic Corridor traveling through the county, they do not desire for the route travel through the downtown and historic area of Dahlonega. Lumpkin County prefers and recommends that the route follow a corridor in the more southern portions of the county.

Goals and Performance Measures

Four Transportation planning goals have been established for Lumpkin County. The first goal is to improve accessibility and mobility of people and goods. The accomplishment of this goal will be measured by establishing a threshold for 2025 roadway LOS C or better and monitoring performance roadway levels

of congestion. The number of alternative roadway connections with capacity for high volume flows will also serve as a measure of transportation access and mobility.

Table 8.16
Goals and Performance Measures

Goals	Performance Measures
• Improve accessibility and mobility of people and goods.	• MTPT 2025 roadway LOS C or better. • Provides alternative roadway connections with capacity for high volume flows.
• Enhance Safety	• Will reduce accident occurrences. • Locations with significant numbers of correctable vehicle crashes. • Provides additional improvements to pedestrian facilities for activity centers. • Provides additional bike lanes or separated bike paths along corridors with high vehicle/bike friction.
• Preserve and improve the existing system, environment, and quality of life.	• Present serviceability ratings (PSR) of 3.0 or above. • Bridge sufficiency ratings above 75. • Number of actively protected wetlands and historic areas protected from encroachment from transportation projects. • Burdens or benefits to environmental justice communities. • Number of pedestrian facilities for activity centers. • Connectivity of bike facilities to regional network. • Percent of area served by transit. • Number of design features that encourage transit patronage.
• Ensure multi-jurisdictional coordination to facilitate interregional connectivity and foster regional economic development.	• Ongoing communication between regional jurisdictions. • Number of alternative roadway connections between jurisdictions with capacity for high volume flows.

The second goal is to enhance safety. The achievement of this goal will be measured by: (1) monitoring and reducing accident rates, and (2) monitoring and reducing the number of locations with correctable vehicle crashes. Other performance measures for this goal include increasing the number of pedestrian facilities for activity centers, and the number of miles of bike lanes, or separated bike paths along corridors with high vehicle/bike friction.

Thirdly, Lumpkin County and Dahlonega will preserve and improve the existing system, environment and quality of life by monitoring performance measures such as present serviceability ratings for pavement, bridge sufficiency ratings, the number of wetlands and historic areas protected from encroachment from transportation projects, and burdens on and benefits to environmental justice communities. This goal will also be measured by the number of pedestrian facilities for activity centers, connectivity of bike facilities to the regional network, the percent of area served by transit, and the number of design features that encourage transit patronage.

Finally, the fourth goal is to ensure multi-jurisdictional coordination to facilitate interregional connectivity and foster regional economic development. Achievement of this goal will be measured by the level of ongoing communication between regional jurisdictions and the number of alternative roadway connections with capacity for high volume flows.

Ensuring that the goals for Lumpkin County and Dahlonega are achieved requires an accurate inventory of the existing transportation infrastructure and a detailed analysis of the operating conditions and services for inventoried facilities. Both of these were conducted early in the planning process and are outlined in previous sections.

Future growth forecasts are essential for developing long-range transportation plans to determine overall needs and the level of transportation strategies required to meet those needs. Transportation planning is an ongoing process where planning factors, such as growth and the assessment of needs, are periodically monitored and reevaluated. The rapid growth in this area requires an effective monitoring and update function of the planning process. Planning assumptions and transportation strategies must be evaluated periodically, as needed.

Decision Context

As the planning process entered the project development phase, a “decision context” within which strategies would be recommended was developed. To ensure that the overall goals for Lumpkin County are

achieved, recommended programs and projects should work to achieve established goals. Whether or not the goals are successfully achieved is assessed objectively by comparing existing and future conditions, using the defined set of performance measures and thresholds.

Four primary "decision context" questions were used to examine potential projects before developing the preferred program of projects:

1. Do the strategies meet the plan's goals and objectives?
The recommended program should demonstrate, through specific performance measures, that the plan's goals and objectives have been met.

2. Are the strategies appropriate and proportional to needs?
Specific performance measures are useful tools for evaluating plans, but may not tell the whole story. Strategies must not only be effective, but also appropriate and proportional to needs.

3. Are strategies cost-effective?
Federal law requires transportation plans to be fiscally constrained. Nevertheless, detailed scrutiny is required to ensure the best possible use of financial resources.

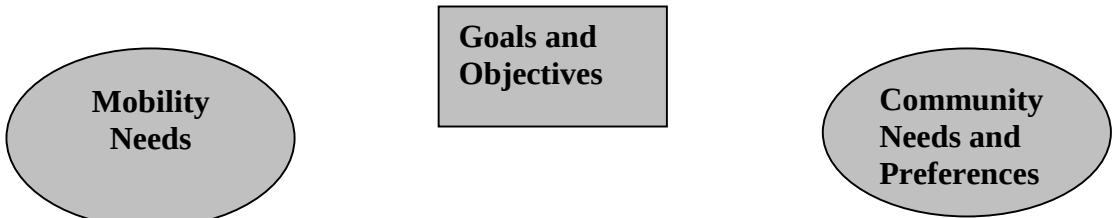
4. Are other options viable?
All viable options must be considered. Population and employment densities determine cost-effectiveness. System optimization improvements, such as improving intersection
Geometrics and signal timing are low-cost options to alleviate localized congestion.

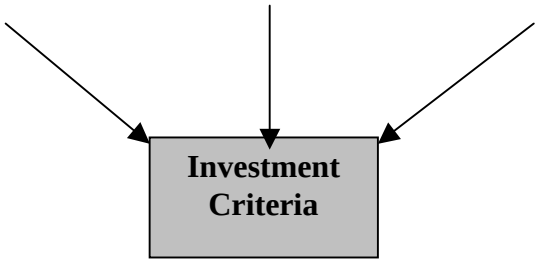
Investment Criteria

Investment criteria guide the transportation planning process and provide a framework for the development of programs and projects. Within the decision context, financial effectiveness analysis is conducted based on identified established investment criteria. Investment criteria ensure that the counties gain the most cost-effective improvements when developing a program of projects.

Community needs and preferences were defined through a series of discussions with community stakeholders and other public involvement efforts. Mobility needs were identified through technical analysis.

Figure 39
Development of Investment Criteria





Goals and objectives, mobility needs, and community preferences combine to define a series of six primary investment criteria:

Investment Criteria:

- ***Efficiency improvements***
- ***Mobility options***
- ***Congestion relief***
- ***Accessibility to interstates and major highways***
- ***East-west connectivity***
- ***North-south connectivity***

Using previously described investment criteria; potential improvement strategies were initially identified and applied to the transportation system. Lower-cost improvements addressing system efficiency or travel demand were considered prior to more costly strategies. Where less expensive measures do not provide adequate improvement, increased system capacity solutions were considered. Finally, the package of improvements in each program category (such as roadway, transit, and bicycle/pedestrian) is evaluated to ensure that transportation improvements work together to define a fully integrated multi-modal transportation system.

Coordination with Regional Planning

The Georgia Planning Act was adopted by the General Assembly in 1989 as a means to encourage better management of growth in the booming areas of the state, while encouraging the less prosperous parts to avail themselves of opportunities for growth. The Planning Act established a coordinated planning program for the State of Georgia, which provides local governments with opportunities to plan for their future and to improve communication with their neighboring governments. The Act established a "bottom-up," comprehensive planning approach initially to be conducted at the local government level, and then at the regional and state levels. The Planning Act also assigns local governments certain minimum

responsibilities to maintain "Qualified Local Government" (QLG) status, and thus, be eligible to receive certain state funding.

The cornerstone of the coordinated planning program is the preparation of a long-range comprehensive plan by each local government in the state. This plan is intended to highlight community goals and objectives as well as determine how the government proposes to achieve those goals and objectives. City and county plans are then used as the basis for a regional development plan.

Regional Development Centers (RDC) are charged with the responsibility of promoting the establishment, implementation, and performance of coordinated and comprehensive planning by municipal and county governments. The RDC is expected to plan for conformity with minimum standards and procedures established by the Planning Act. As the designated RDC for the Georgia Mountains area, the Georgia Mountains Regional Development Center addresses regional issues and mobility needs through planning efforts that culminate in the development of the Regional Comprehensive Plan. Lumpkin County and Dahlonega should continue to work closely with each other, the RDC, and other municipalities and local governments in surrounding counties to ensure regional coordination in the development of these plans.

To address regional transportation planning impacts, Lumpkin County and Dahlonega must work closely with the GDOT Office of Planning and the GDOT District One Office in Gainesville, Georgia. GDOT's Office of Planning assigns specific planning resources to ensure a regional and statewide perspective in planning for Lumpkin County. The GDOT District One Office also offers personnel and other resources to bring regional and local perspective to the transportation planning process. Transportation solutions are identified for Lumpkin County and other counties through the development of improvement projects included in the six-year GDOT Construction Work Program (CWP) and the three-year Statewide Transportation Improvement Program (STIP).

Transportation Investment Strategies

An inventory of potential strategies was evaluated for the purpose of developing this document. These strategies have the potential to reduce congestion, increase capacity, and improve the quality of life for Lumpkin County and Dahlonega in the future. Programs and projects to address identified needs in Lumpkin County were drawn from the three classifications presented below.

- Growth Management
- Safety and Operations
  - Traffic System Operations Optimization
  - Intersections and Interchanges
- Infrastructure Enhancements
  - Local Transit
  - Roadway Projects
  - Pedestrian and Bicycle Improvements

Growth Management

Despite the population growth projected for Lumpkin County over the next 30 years, reduced traffic congestion and improved quality of life can be achieved by managing the type and location of growth. Planning the location of community activities and services closer to neighborhoods and one another could substantially reduce vehicle trips. Mixed land use planning on a regional, community, and activity center level will improve accessibility to major destinations. By clustering or mixing uses in a small area, community residents have access to most of their daily needs within a short multi-purpose drive, bicycle ride, or walk from home. Schools, shopping centers, and places of employment are popular destinations and should be developed in locations providing maximum accessibility by the residents of the community or region.

An essential tool in controlling transportation demand, land use regulations such as zoning or subdivision development codes can enable growth, while reducing traffic congestion throughout Lumpkin County. Traffic congestion will decrease as vehicle trips shorten and transit, bicycling and walking become viable travel options as strong growth management efforts are pursued.

Safety and Operations

Non-capacity adding projects, such as safety and operational projects, can address specific location or community needs. These improvements address the need to maximize the efficiency and safety of the existing roadway network as a foundation for providing an overall transportation system that meets future demands. Safety and operational projects normally address issues such as sight distance limitations, sharp turning radii, intersection angles, and signage placement. The projects are essential to meeting the transportation needs of the community without adding roadway capacity. The safety and operations category is a key element of the recommended program of projects.

Traffic System Operations Optimization

Small-scale improvements can be incorporated into the existing roadway network to improve the flow of traffic, and they usually have a relatively short completion schedule and lower cost than roadway widening or new construction. Whenever possible, traffic operation improvements should be considered before determining the need for a widening or new construction project. Traffic operations can be optimized in many ways, including providing inter-parcel access, adding medians, closing curb cuts (driveways), adding turn, acceleration or deceleration lanes, or installing or upgrading traffic signals. Coordinated signal timing plans link together the operations of a series of traffic signals located close enough together to impact traffic conditions along an entire corridor. Developed to vary by time of day and day of week, coordinated signal timing plans improve the efficiency of signal operations along congested corridors, increasing the corridor's effective capacity by ten to fifteen percent.

Intersections and Interchanges

Another transportation improvement strategy that addresses safe and efficient travel on the roadway network is the improvement of intersections and interchanges. Many transportation conflicts resulting in congestion and safety issues are found at intersections and interchanges. Their improvement is vital to the safety and efficiency of the transportation network and builds a foundation for a network that meets future demands.

Intersection improvements can correct roadway deficiencies, increase safety, and result in increased capacity without the need to widen or make additional improvements to the roadway. Intersections with high crash rates or severe congestion should be considered for improvements. In addition to intersection improvements, the conversion of critical intersections on high volume roads into interchanges provides effective capacity increases along corridors.

Infrastructure Enhancements

The need to maximize the effectiveness of existing roadway infrastructure is critical in maintaining an efficient transportation network. Potential infrastructure improvements include transit systems, roadway projects, bike and pedestrian facilities, and other strategies requiring capital investment.

Local Transit

The implementation of multi-modal alternatives offers potentially sound solutions to meet the region's transportation needs. Demand response local transit can extend the useful life of the expensive roadway infrastructure and offer commuters a safe and convenient ride to work that, when all factors are considered, is cost-effective for most commuters.

Roadway Projects

Roadway improvements identified through the roadway analysis and public involvement process are the central feature of the long-term planning effort. Additional roadway projects that increase levels of service, reduce congestion, and improve safety become the foundation for meeting transportation needs over the planning period, but may be subjected to air quality emissions testing conducted region-wide.

Lumpkin County and Dahlonega are both actively pursuing the development and maintenance of a road network that accommodates continuing growth. A list of current and future projects was discussed in

earlier sections and in the sections: Improvement Projects and Potential Funding Sources listed below. You may also refer to Appendix A for further details.

Pedestrian and Bicycle Improvements

Used for recreation as well as transportation, pedestrian and bicycle facilities serve as an integral element of a multi-modal transportation network. Pedestrian and bicycle facilities are vital for providing links to transit, accommodating short trips between neighborhoods and community facilities, and providing circulation between land uses in denser activity centers. The connection of neighborhoods to activity centers, such as employment centers, community facilities, and retail opportunities, by way of pedestrian and bicycle facilities, will improve resident accessibility to these locations. Demand for bicycle and pedestrian facilities have grown substantially since the inception of ISTEA and TEA-21, which have provided more funding for these modes.

Georgia's Statewide Bicycle Plan, created by GDOT, proposes a statewide network of 14 named and numbered routes totaling 2,943 miles that are or will be particularly well-suited for bicycle use. As previously stated, there is only one State Bike Route located within the planning area: SBR 90. There are currently no plans to establish new bike routes, however, discussion have occurred during this planning effort which indicates a clear desire to explore further biking opportunities within Lumpkin County and includes efforts to establish recreation mountain biking trails throughout Lumpkin County as a joint effort with the U.S. Forestry Service.

Scenic Highways

This study recommends that designated scenic highway routes be considered for bicycle use where possible. Parts of these routes are too steep for cyclists or else the traffic volume is too great. However, these routes are already being promoted to visitors and cyclists are using accessible portions of the routes. To increase safety, it is recommended that as improvements are made, the addition of bicycle facilities be considered.

Road Improvement Projects

All transportation improvement projects within Lumpkin County are funded through the Georgia Department of Transportation. All projects for the county and city are planned and programmed as part of the Statewide Transportation Improvement Program (STIP). This document details the projects identified by the state through the planning process and are prioritized according to their importance and the availability of funds thru the Congressional balancing process. The STIP includes Highway, Bridge, Bicycle, Pedestrian, Transportation Enhancement activities, and Public Transportation (transit) projects. Projects in the STIP emphasize the maintenance, safety, and improvement of existing transportation facilities and public transportation systems. Project related costs, such as Preliminary Engineering (PE), Right of Way (ROW), and Construction are identified for highways, and Capital and Operating costs for public transit projects. The STIP must fiscally balanced, and include only those projects with funding available or that have a reasonable expectation of obtaining funds. The STIP covers projects to be developed over a three-year period and is updated on an annual basis. There are 3 major funding categories for Road Improvement projects under the STIP:

- Federal Aid
- State Funds
- Local Funds

The last approved STIP covers the years FY 2004, 2004, and 2006. There are three projects planned during this period:

- Project # 0000307- Bridge Replacement on SR 52 @ Etowah River
- Project # 0000319- Construct passing lanes and realignment of SR 52
- Project # 0000518- Intersection improvement for SR 400 at SR 60 & SR 115/Long Branch Road

The Georgia Department of Transportation has begun work for the newest STIP (draft) update, which includes projects for FY 2005, 2005, and 2007. This draft includes the continuation of project number 0000518 and it also includes project number 0000565, a bridge replacement project for CR 226/Auraria Road at Crooked Creek. No further projects have been identified for Lumpkin County and the next STIP update is not planned until FY 2005. Furthermore, GDOT's 6-year Construction Work Program (CWP) did not identify any additional long-range projects, which have a completion date beyond FY 2006 for Lumpkin County. For a complete list of details regarding these projects for Lumpkin County please refer to GDOT's Statewide Transportation Improvement Program and Construction Work Program documents.

In addition to these projects listed in the STIP and CWP, Lumpkin County has identified the following potential Long Range Projects, which are not currently listed as part of the CWP. These projects are anticipated to be on the 7 to 20 year horizon.

- Widening of Burnt Stand Road- expand lane widths for safety 7 year horizon
- Widening of Long Branch Extension from 2 to 4 lanes 7 year horizon
- Widening of Long Branch Road & Extension of GA 400
  - From current location up to SR 52 during 10 year horizon
  - From SR 52 up to Frogtown Road during 20 year horizon (New Construction)
  - From Frogtown Road up to SR 11/US 129 during 20 year horizon (New Construction)

Potential Funding Sources

The most likely funding sources are identified for each project, based largely on the location of the project and responsible agencies. In some situations, it may be possible for the county or local agencies to accelerate the process of upgrading facilities by increasing local funding participation. The most likely funding sources for Lumpkin County are listed as follows:

- General Funds
- Special Purpose Local Options Sales Tax (SPLOST)
- Local Options Sales Tax (LOST)
- FHWA, Transportation Enhancement Activities funds
- FTA, Rural Public Transportation funds
- State Aid, County / City contracts

- Federal Lands Program, Scenic Byways

Other options, considered less likely for Lumpkin County specifically, include:

- Appalachian Regional Commission program grants
- Transit fare-box revenues
- Public/private partnerships, such as Community Improvement Districts (CIDs)
- Development impact fees

Lumpkin County and the City of Dahlonega will continue to seek out other funding opportunities where available and will pursue all efforts to reasonably secure federal, state, and local funds, in an effort to maintain and improve the transportation network for the its citizens. However, it must be mentioned that Lumpkin County/Dahlonega's ability to obtain such funding hinges on favorable economic conditions and the highly competitive nature of the demands on transportation funding for such projects within the Congressional District, which serves the area and surrounding communities.

Project Phasing

Although a large number of transportation projects have been recommended, it is not practical or feasible to implement all improvements simultaneously. A phasing plan was therefore developed to provide a starting point to use in prioritizing the recommended projects for further evaluation, funding, and implementation. The prioritization was based on the level of deficiency to be mitigated or eliminated by the project, the estimated cost and the difficulty of implementation from a planning or design perspective. The three time periods used were as follows:

- Short-range period: 2004 through 2007
- Medium-range period: 2008 through 2014
- Long-range period: 2015 through 2025

The specific phase recommended for each improvement was previously outlined in earlier discussions under Table 8.12. Also see Appendix A.

Project Implementation

In order to enhance the potential of success for this proposed plan, the following implementation guidelines are offered:

- Continue public outreach efforts for project-specific details as part of studying the project feasibility.
- Secure funding for each short-range project.
- Identify ways to utilize resources to accelerate the planning, design and construction process for the recommended projects.
- Undertake study to determine more detailed cost and design elements for the recommended projects.

Conclusions

Lumpkin has a growing population as well as burgeoning tourist activity to a multitude of scenic attractions. The associated traffic generates difficult transportation planning challenges for the area. Improvements were selected that can be implemented without changing the fundamental character of the study area. The purpose of this element was to provide information and transportation recommendations for Lumpkin County and the City of Dahlonega in order to address their transportation needs. It is highly recommended that Lumpkin County and the City of Dahlonega, jointly invest in a comprehensive transportation study as an effort to establish a long-range transportation planning process.